

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for his thorough review of the application.

Objections to the Specification

The abstract was objected to for containing two separate paragraphs. The abstract has been amended to contain only one paragraph.

Rejections under 35 U.S.C. § 112

Claims 1-3, 5-6, 9, 11, and 17 were rejected for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. Specifically, the Examiner objected to the form of claim 1. Claim 1 has been amended and is believed to comply with 35 U.S.C. § 112. In addition, claims 1-3, 5-6, 9, 11, and 17 were objected to as containing "method limitations." These limitations have been amended and are believed to comply with the requirements of 35 U.S.C. § 112. In addition, claim 11 was objected to as containing a trade name. The Applicant has replaced the term with a suitable chemical term. These claims have been amended to comply with 35 U.S.C. § 112. No new matter was added by way of these amendments, which have been made for clarification purposes only. Accordingly, withdrawal of these rejections is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 1-3 and 5-6 were rejected as obvious over U.S. Patent No. 2,532,011, issued to Dahlquist et al. (Dahlquist), in view of Japanese Patent No. JP 07-330929, issued to Taku. To the extent this rejection applies to the amended claims, it is respectfully traversed.

Amended claim 1 recites a printing medium comprising a base film having a rubbed surface and an adhesive layer disposed on that surface, a printable face formed on an opposite surface, and wound on a roll so that the printing face of a first wrap is adjacent to the adhesive face of a second wrap. Because the printing face of a first wrap is adjacent to the adhesive face of a second wrap, a release film is not necessary. The invention, according to this embodiment, advantageously avoids the need for use of a release film, which, in prior art systems, would be disposed on the roll between the printing and adhesive layers, would often stick in the roll, and would require separate disposal. Rubbing a surface of the base film advantageously results in a greater adhesion of the adhesive layer to the base film, so that the base film and adhesive layer are not separated when the printing medium is unwound from the roll, while avoiding the use of a release film.

Dahlquist discloses a tape or liner having a low-adhesion coating. In one embodiment, adhesive labels may be mounted on the liner. These labels function as a printable surface that may be used in conjunction with the Dahlquist liner. However, these labels are not integrated into the low-adhesion liner sheet, but are instead mounted upon the surface of the sheet. According to Dahlquist (Col. 6, lines 71-72), flexing of the liner will result in separation of the labels from the liner. Therefore, the device according to Dahlquist cannot be rolled or wound, as recited in the instant claims. Furthermore, the low adhesion surface of Dahlquist lies between the labels and the liner, whereas the instant claims, as amended, require that the

adhesive layer be formed on a surface of the base film opposite the printable face. Dahlquist's invention is a low-adhesion coating, whereas an object of the claimed embodiments is to enable the use of stronger adhesives with a biodegradable film, contrary to the teachings of Dahlquist. Finally, the labels of Dahlquist are separate and require the use of a separate liner sheet, which is discarded once the labels are removed. Any base film according to Dahlquist does not form a printable face, but instead forms only a substrate for attachment of printable labels. The instant claims advantageously provide a printing medium in which no release film or similar liner is necessary, thereby minimizing waste (p. 12, lines 3-5, p. 37, lines 16-17). Therefore, the labels according to Dahlquist are not analogous to the printing medium of the instant claims, either in form or function.

In summary, Dahlquist fails to teach or suggest a base film having a printable face on one side and a rubbed surface on the opposite side. Dahlquist also fails to teach or suggest a printing medium that is wound into a roll.

Taku teaches the rubbing of a front face of a synthetic resin film with a coupling agent solution in order to achieve chemical modification of the face. Notably, Taku seeks to provide an increased adhesion. In contrast, Dahlquist seeks to provide a low-adhesion coating. Accordingly, it is unclear to the Applicant why one of ordinary skill, without having reference to the Applicant's disclosure, would seek to combine these conflicting references. Furthermore, Taku fails to teach or suggest the deficiencies previously noted in Dahlquist, namely the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll. Therefore, claim 1 is patentable over these two references. Claims 2-3, and 5, which depend from claim 1, are likewise patentable. Claim 6 has been canceled, rendering its rejection moot. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 7-10, 12-13, and 18 were rejected as obvious over Dahlquist in view of Taku and further in view of U.S. Patent No. 5,663,288, issued to Shinoda et al. (Shinoda), and further in view of Japanese Patent No. JP 08-267968, issued to Kanshin et al. (Kanshin). To the extent this rejection applies to the amended claims, it is respectfully traversed.

As discussed above, the combination of Dahlquist with Taku is improper. Furthermore, Taku fails to teach or suggest the deficiencies previously noted in Dahlquist, namely the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll.

Shinoda teaches a degradable adhesive film and degradable resin composition. Kanshin teaches a biodegradable card. Neither Shinoda nor Kanshin teaches or suggests the deficiencies noted in Dahlquist, particularly the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll. Therefore, the combination of Shinoda and Kanshin with Dahlquist and Taku will still fail to teach or suggest the elements recited in the instant claims. Moreover, without reference to the Applicant's disclosure, it is unclear why one of ordinary skill in the art would be motivated to "pick and choose" the cited features from these particular prior art references, absent some suggestion to do so. This suggestion or motivation is not found in these references. Particularly where at least two of the references (Taku and Dahlquist) have opposing objectives (high adhesion versus low adhesion), there would not appear to be any motivation to combine them in the manner suggested by the Examiner. Moreover, even assuming *arguendo* that these references are combinable, they still fail to teach or suggest the combination recited in the instant claims. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 4 was rejected as obvious over Dahlquist in view of Taku and further in view of U.S. Patent No. 5,563,023, issued to Kangas et al. (Kangas) and Japanese Patent No. JP 411322949 A, issued to Natsume et al. (Natsume). This rejection is respectfully traversed.

Claim 4 depends from amended claim 1 and therefore includes every element of claim 1. As previously discussed, the combination of Dahlquist with Taku is believed to be improper. Furthermore, Taku fails to teach or suggest the deficiencies noted in Dahlquist, namely the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll.

Kangas teaches a photoimageable element comprising a substrate, a photosensitive material coated on the substrate and a protective overcoating. Natsume teaches a colorant composition which is able to color an aliphatic polyester-based biodegradable resin during molding. Neither Kangas nor Natsume teaches or suggests the deficiencies previously noted in Dahlquist. Furthermore, the Examiner has applied no line of reasoning, and the Applicant is aware of none, which would provide the motivation to combine these four references to achieve the claimed invention. Without reference to the Applicant's disclosure, it is unclear why one of ordinary skill in the art would be motivated to "pick and choose" features from particular prior art references, absent some suggestion to do so. This suggestion or motivation is not found in these references. Particularly where at least two of the references (Taku and Dahlquist) have opposing objectives (high adhesion versus low adhesion), there would not appear to be any motivation to combine them in the manner suggested by the Examiner. Moreover, even assuming *arguendo* that these references are combinable, they will still fail to teach or suggest the combination recited in claim 4. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 7-8 and 11 were rejected as obvious over Dahlquist in view of Taku and further in view of U.S. Patent No. 6,235,825, issued to Yoshida et al. (Yoshida). To the extent this rejection applies to the amended claims, it is respectfully traversed.

Claims 7-8 and 11 depend from claim 1 and therefore include every element of amended claim 1. As previously discussed, neither Taku nor Dahlquist teaches or suggests the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll, as recited in claim 1. Furthermore, the combination of Dahlquist with Taku is believed to be improper.

Yoshida teaches a polylactic acid-based resin composition and film. Yoshida neither teaches nor suggests the deficiencies previously noted in Taku and Dahlquist. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 14-16 were rejected as obvious over Dahlquist in view of Taku and Shinoda and further in view of U.S. Patent No. 6,162,858, issued to Auguste et al. (Auguste). To the extent this rejection applies to the amended claims, it is respectfully traversed.

Claims 14-16 depend from claim 1 and therefore include each element of claim 1, as discussed above. As previously discussed, neither Taku nor Dahlquist teaches or suggests the rubbed surface on an opposite side of a printable face and the winding of a printing medium into a roll, as recited in claim 1. Furthermore, Taku teaches away from Dahlquist, seeking to provide an increased adhesion where Dahlquist seeks to provide a low-adhesion coating. Therefore, the combination of Dahlquist with Taku is improper.

Shinoda teaches a degradable adhesive film and degradable resin composition. Auguste teaches a printable adhesive composite consisting of polyolefin in sheet form. Neither

Shinoda nor Auguste teaches or suggests the deficiencies previously noted in Dahlquist. Furthermore, the Examiner has applied no line of reasoning, and the Applicant is aware of none, which would provide the motivation to combine these four references to achieve the claimed invention. Without reference to the Applicant's disclosure, it is unclear why one of ordinary skill in the art would be motivated to "pick and choose" features from particular prior art references, absent some suggestion to do so. This suggestion or motivation is not found in these references. Particularly where at least two of the references (Taku and Dahlquist) have opposing objectives (high adhesion versus low adhesion), there would not appear to be any motivation to combine them in the manner suggested by the Examiner. Moreover, even assuming *arguendo* that these references are combinable, they still fail to teach or suggest the combination recited in the instant claims. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Claims 1-5 and 7-19 have been shown to be allowable over the prior art. Applicant believes that this paper is responsive to each and every ground of rejection cited by the Examiner in the Action dated August 2, 2002, and respectfully requests favorable action in the form of a Notice of Allowance. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03310.002001).

Respectfully submitted,

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45,925
Jeffrey S. Bergman
For: Jonathan P. Osha, Reg. No. 33,986
Rosenthal & Osha L.L.P.
One Houston Center, Suite 2800
1221 McKinney Street
Houston, TX 77010

Telephone: (713) 228-8600
Facsimile: (713) 228-8778

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Marked-Up Versions of Abstract and Claims

IN THE ABSTRACT:

[The present invention aims to provide a printing medium free from release films.]

A printing medium is manufactured by forming a primer layer 12 and an adhesive layer 13 successively on the rubbed surface of a base film 11 and wound into a roll 15. When the printing medium is delivered from roll 15, adhesive layer 13 does not remain on the roll 15 side even if adhesive layer 13 has a low adhesive power because the adhesion between adhesive layer 13 and primer layer 12 is strong while the adhesion between adhesive layer 13 and base film 11 in roll 15 is weak. The printing medium can be run in a printer without using a release film because adhesive layer 13 has a low adhesive power.

IN THE CLAIMS:

[c1] (Amended) [A printing medium comprising a base film and an adhesive layer formed on one side of said base film while the other side of said base film forms a printable face, wherein a surface of said base film is subjected to rubbing treatment with a rubbing means and then said adhesive layer is formed on a rubbed surface and said printing medium is wound into a roll wherein said adhesive layer and said printable face of said base film are in close contact with each other.] A windable printing medium comprising:
a base film comprising a rubbed surface and an adhesive layer disposed on the rubbed
surface;
a printable face formed on a surface of the base film opposite the rubbed surface; and

wherein the windable printing medium is adapted such that when wound into a roll, the printable face of a first wrap of the base film is adjacent to the adhesive layer of a second wrap of the base film.

- [c2] (Amended) The windable printing medium according to claim 1 wherein said adhesive layer [is formed by applying and then drying] comprises an adhesive layer starting solution containing an adhesive[in an organic solvent on said rubbed surface of said base film].
- [c3] (Amended) [A] The windable printing medium according to claim 1, wherein [comprising a base film,] a primer layer [formed] is disposed between the rubbed surface of the [on one side of said] base film and [an] the adhesive layer [formed on a surface of said primer layer while the other side of said base film forms a printable face, wherein a surface of said base film is subjected to rubbing treatment with a rubbing means and then said primer layer is formed on a rubbed surface and said printing medium is wound into a roll wherein said adhesive layer and said printable face of said base film are in close contact with each other].
- [c4] (Amended) The windable printing medium according to claim 3 wherein said primer layer contains a biodegradable colorant.
- [c5] (Amended) The windable printing medium according to claim 3 wherein said primer layer [is formed by applying and then drying] comprises a primer layer starting solution containing an adhesive in an organic solvent [on said rubbed surface of said base film].

- [c7] (Amended) The windable printing medium according to claim 1 wherein said base film is biodegradable.
- [c8] (Amended) The windable printing medium according to claim 7 wherein said adhesive layer contains an opaque filler and said opaque filler does not inhibit the biodegradability of said base film.
- [c9] (Amended) The windable printing medium according to claim 7 wherein said base film [has] comprises a polylactic acid film [and the surface of said polylactic acid film is subjected to said rubbing treatment].
- [c10] (Amended) The windable printing medium according to claim 9 wherein said polylactic acid film is biaxially oriented polylactic acid film.
- [c11] (Amended) The windable printing medium according to claim 7 wherein said base film [has a Bionolle] comprises an aliphatic polyester [film and the surface of said Bionolle film is subjected to said rubbing treatment].
- [c12] (Amended) The windable printing medium according to claim 8 wherein adhesive components contained in said adhesive layer are mainly consisted of an adhesive not inhibiting the biodegradability of said base film.
- [c13] (Amended) The windable printing medium according to claim 12 wherein said adhesive is natural rubber.
- [c14] (Amended) The windable printing medium according to claim 12 wherein said adhesive is a polyisoprene rubber.

[c15] (Amended) The windable printing medium according to claim 13 wherein said adhesive layer contains an antiaging agent.

[c16] (Amended) The windable printing medium according to claim 14 wherein said adhesive layer contains an antiaging agent.

[c17] (Amended) The windable printing medium according to claim 1 wherein said printable face [is subjected to rubbing treatment with a rubbing means] comprises a rubbed surface.

[c18] (Amended) The windable printing medium according to claim 1 wherein a biodegradable receiving layer is formed on the surface of said printable face.

[c19] (Amended) The windable printing medium according to claim 17 wherein a biodegradable receiving layer is formed on the surface of said printable face.